

CLAIMS

What is claimed is:

Subj
1. A method of providing a backup link active schedule for use in controlling communication in a process control system having a master link active scheduler and a backup link active scheduler communicatively coupled together via a databus, comprising the steps of:

 storing a link active schedule in a master link active scheduler;
 automatically transmitting the link active schedule from the master link active scheduler over the databus to the backup link active scheduler upon receipt of the link active schedule in the master link active scheduler; and
 storing the link active schedule in the backup link active scheduler.

2. The method of claim 1, further comprising the step of storing a list of backup link active scheduler devices associated with the databus in the master link active scheduler.

3. The method of claim 1, further comprising the steps of detecting when the backup link active scheduler is unavailable for storage of the link active schedule and notifying a user that the backup link active scheduler is unavailable for storage of the link active schedule.

4. The method of claim 1, further comprising the steps of detecting a failure to store the link active schedule in at least one backup link active scheduler and notifying a user of the detected failure to store the link active schedule in at least one backup link active scheduler.

5. The method of claim 1, wherein the step of automatically transmitting includes the step of transmitting using an open communication protocol.

6. The method of claim 1, wherein the step of automatically transmitting includes the step of transmitting using a Fieldbus communication protocol.

7. The method of claim 1, further comprising the step of recognizing that the backup link active scheduler is no longer communicating on the databus.

8. The method of claim 7, wherein the step of recognizing includes the step of comparing a live list to a backup list.

9. The method of claim 7, further comprising the step of notifying a user that the backup link active scheduler is no longer communicating on the databus.

10. A system for controlling communications on a databus using a link active schedule, comprising:
a master link active scheduler having a memory that stores a link active schedule and a processor programmed to automatically transmit the link active schedule over the databus upon receiving the link active schedule; and
a backup link active scheduler in communication via the databus with the master link active scheduler that receives the link active schedule transmitted from the master link active scheduler.

11. The system of claim 10, further comprising a list of backup link active scheduler devices stored in the memory.

12. The system of claim 11, wherein the processor is further programmed to send the link active schedule to the backup link active scheduler devices in the list of backup link active scheduler devices.

13. The system of claim 10, wherein the processor is further programmed to detect when the backup link active scheduler is unavailable for storage of the link active schedule and to notify a user that the backup link active scheduler is unavailable for storage of the link active schedule.

14. The system of claim 10, wherein the master link active scheduler and the backup link active scheduler are each adapted to transmit over the databus using an open protocol.

15. The system of claim 14, wherein the open protocol is the Fieldbus protocol.

16. The system of claim 10, wherein the backup link active scheduler is a field device.

17. A system for controlling a process, comprising:
a user interface coupled to a first databus;
a controller communicatively coupled to the user interface through the first databus;
an I/O device coupled to the controller and further coupled to a second databus;
a plurality of field devices coupled to the second databus, each of the field devices adapted to communicate with the I/O device over the second databus;
a primary scheduler coupled to the second databus and adapted to use a link active schedule to control interoperation of the field devices;
a backup scheduler coupled to the second databus and adapted to communicate with the primary scheduler and the plurality of field devices via the second databus; and

a processor associated with the primary scheduler and programmed to automatically store a backup copy of the link active schedule in the backup scheduler upon receiving the link active schedule.

18. The system of claim 17, wherein the second databus uses a Fieldbus communication protocol.

19. A communication scheduling system for use in a process control system having a master link active scheduler with a processor therein and a backup link active scheduler communicatively coupled to a databus, comprising:

a computer readable memory;
a first storing routine stored on the memory and adapted to be executed by the processor that stores a link active schedule in the master link active scheduler; and

an automatic transmission routine stored on the memory and adapted to be executed by the processor that automatically transmits the received link active schedule from the master link active scheduler over the databus to the backup link active scheduler upon receipt of the link active schedule in the master link active scheduler.

20. The communication scheduling system of claim 19, wherein automatic transmission routine is further adapted to receive and store a list of backup link active scheduler devices and to automatically send the list of backup link active scheduler devices to the backup link active scheduler.

21. The communication scheduling system of claim 19, further comprising a detecting routine stored on the memory and adapted to be executed by the processor that detects when the backup link active scheduler is unavailable for storage of the link active schedule.

22. The communication scheduling system of claim 21, further comprising a notifying routine stored on the memory and adapted to be executed by the processor that notifies a user when the backup link active scheduler is unavailable for storage of the link active schedule.

23. The communication scheduling system of claim 19, further comprising a detecting routine stored on the memory and adapted to be executed by the processor that detects a failure to store the link active schedule in the backup link active scheduler.

24. The communication scheduling system of claim 23, further comprising a notifying routine stored on the memory and adapted to be executed by the processor that notifies a user of the failure to store the link active schedule in the backup link active scheduler.

25. The communication scheduling system of claim 19, further comprising a detecting routine stored on the memory and adapted to be executed by the processor that detects when the backup link active scheduler is no longer communicating on the databus.

26. The communication scheduling system of claim 25, further comprising a notifying routine stored on the memory and adapted to be executed by the processor that notifies a user that the backup link active scheduler is no longer communicating on the databus.